INDUSTRIAL WASTES
HAMMERMILL PAPER COMPANY
ERIE CITY, ERIE COUNTY
APPLICATION NO. 3681008

July 2, 1968

POLLUTION REPORT: Not obtained for this application, as the application is for deep well disposal of waste pulping liquor to the Bass Island formation. This formation was previously approved as being suitable for receiving the subject wastes.

DISCUSSION: The applicant proposes construction of a third deep well to be used for disposal of waste pulping liquor from their industrial establishment. The liquor is to be injected through pressure into the Bass Island formation. This well will then be operated in conjunction with two other injection wells, which were constructed previously and have been permitted by the Pennsylvania Department of Health's Sanitary Water Board. After construction of this well, the wastes will be injected into the receiving horizon on a varied schedule between the three wells. Both No. 3 and No. 2 wells will be of sufficient capacity to handle the entire waste flow coming from the pulping process; however, they will be operated off the same set of pumps and thus, will be unable to receive more than the capacity of one alone, unless additional pumping facilities are provided. The time schedule for operation of the individual wells will be developed by actual experience after all three wells are in operable condition.

No. 3 well was drilled to a depth of 2354 feet. A fiberglass injection tubing was then installed and the entire well cased with concrete to a depth below the beginning of the Bass Island formation, which starts at a depth of 1586 feet. The outside well casing extends further down to a depth of 2181 feet, where it was set in acid resistant concrete and provided with a 5 foot plug, thus preventing further flow down the well. The two formations between this plug and the Bass Island formation, the Saline and Lockport formations are impervious and not capable of being injected. They have been shown to meet all the Department's requirements for an injection formation except for the permeability.

Injection will be accomplished into the Bass Island formation by means of holes or perforations in the casing between 1620 feet and

1720 feet. Injection tests showed that approximately 35 barrels/minute could be injected at an injection pressure of 1300 psig, 19 barrels/minute at an injection pressure of 1100 psig and 12 barrels/minute at an injection pressure of 1050 psig. Thus, the applicant has concluded that there would be no problems encountered in injecting from 14 to 20 barrels/minute. The applicant has shown that the Bass Island formation in this area has a greater porosity than it does in the other areas and that there was no change in the injection pressure of No. 2 well while No. 3 well was in operation. This indicates that there should be no immediate problem with insufficient capacity of the chosen horizon.

A landing nipple is to be installed at a 1580 foot depth to provide a permanent seat to which a retrievable line plug can be attached in case the well should fail. A request that such a nipple also be installed at 60 feet could not be complied with, as the well had already been constructed. However, it is the writer's opinion that the landing nipple at the lower depth will be quite sufficient to prevent excessive pollution, should another failure occur, as did in the No. 1 well.

The fiberglass injection pipe has been coated with sand to provide a good bond with the cement which completely fills the space between the injection pipe and the well casing. This, in conjunction with the steel hanger provided at the surface, should prevent any problems due to tinsel strain on the tubing. The cement found between the injection tubing and the intercasing will help to increase the bursting strength of the injection tubing.

An earthen dyke is to be constructed around well No. 3 to prevent any release of pulping liquor due to leakage, either of pipes or the deep well itself. A pump is to be provided to pick up any liquor stored within these dykes and pump them to storage tanks pending ultimate disposal. Such disposal will presently consist of discharge with the effluent presently not being treated. Once the remainder of the effluent is treated, any leakage from the deep well area will be disposed of along with that effluent.

SPECIAL CONDITIONS:

A - T
B - The permittee shall provide means for measuring and recording the volume of waste water disposed of daily.
C - FF

D - XX
E - The approval herein granted is predicated upon the claims made by the permittee's designing engineers in the data supporting the application as to the containment of the wastes in the strata specified. Should the wastes migrate from the specified strata, the permittee, upon notice from the Board, shall cease the operation of this waste disposal facility.
F - MMM

STANDARD CONDITIONS: 1, 2, 3, 6, 7, 8, 10, 13, 14 and 17.

RECOMMENDATIONS: Approval, subject to the above standard and special conditions.

Respectfully submitted,

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APPROVED:

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